UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,995	02/20/2002	Huizhao Wang	CISCP263/4714	1315

22434 7590 06/02/2006	EXAMINER
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250	PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/080,995	WANG ET AL.
	Examiner	Art Unit	
	Justin M. Philpott	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>*13 April 2006*</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-43* is/are pending in the application.

    4a) Of the above claim(s) <u>*18-43*</u> is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-17* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>*01 July 2002*</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>*(5): 3/2003-1/2005*</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Claims 18-26 (Group II) and claims 27-43 (Group III) are withdrawn from further

consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group, there being

no allowable generic or linking claim. Applicant timely traversed the restriction (election)

requirement in the reply filed on April 13, 2006, and provisionally elected claims 1-17 (Group I)

to be examined.

2.   Regarding applicant's argument in the reply filed April 13, 2006, applicant's argument

that claims in all of Groups I, II and III should be examined because "many of the claimed

features are similar" and each claim "relates to" similar network elements (e.g., see page 3) is not

persuasive. In particular, applicant even admits, "the scope of the claims of Groups I, II, and II

varies and Applicant agrees that the claims are patentably distinct" (page 3). Not finding

applicant's argument persuasive that claims of all of Groups I, II and III should be examined,

Examiner maintains the position recited in the Restriction Requirement mailed March 14, 2006.

That is, each of Groups I, II and III comprise a distinct method/apparatus drawn to a distinct

invention classified in distinct class/subclasses and would require a separate search and

examination, which would impose an undue burden on the Examiner. Thus, claims 1-17 (Group

I) have been examined in the following office action in accordance with applicant's election, and

claims 18-26 (Group II) and claims 27-43 (Group III) are withdrawn from further consideration

pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group, there being no allowable

generic or linking claim.

Information Disclosure Statement

3.   Each of the references cited in applicant's information disclosure statements filed prior to

this office action have been considered by the Examiner to the extent required by MPEP.

Additionally, it is noted herein that because of the large number of references submitted by

applicant, (to date, a total of 86 references), if applicant believes passages from a select few of

these references may have significantly more relevance than the other references with respect to

applicant's claimed invention, Examiner would welcome any additional statement(s) of

relevance in response to this office action, *if applicable*. However, such further action by

applicant is *not* required. See, *Magarl, L.L.C. v. Crane Co.*, 2004 WL 2750252, S.D. Ind., 2004

(considering situations when "an unduly burdensome Information Disclosure Statement" may

rise to the level of inequitable conduct).

Claim Objections

4.   Claim 1 is objected to because of the following informalities: it appears that the phrase

"the access point information including an access point subnet and a gateway" (claim 1, lines 4-

5) should be changed to, *e.g.*, "the access point information including information identifying an

access point subnet and a gateway" or "the access point information including identifying an

access point subnet and a gateway", since it is unclear how *intangible* "information" can include

physical elements of an "access point subnet and a gateway". Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No.

6,515,974 to Inoue et al.

Regarding claim 1, Inoue teaches, in a first access point, a method of supporting mobility

for a node that does not support Mobile IP, comprising: receiving access point information from

a second access point (e.g., see col. 13, lines 49-59 regarding receiving a location registration

message from a home agent by another home agent; see also FIGS. 3-5 regarding home agents 5

and 6 and communications between corresponding networks 1 and 2); storing access point

information (e.g., comprising location registration message and packet relay device information;

see col. 13, lines 26-33 regarding home agents storing the location information, and see col. 13,

line 60 – col. 14, line 26 regarding table updating which includes updating an address to be that

of a packet relay device 4/GW-p), the access point information including information identifying

an access point subnet (e.g., see col. 10, lines 6-27 regarding the registration message indicating

a location of the mobile terminal 3, and particularly, lines 24-27 regarding the location

comprising the subnet) and a gateway (e.g., see col. 13, line 60 – col. 14, line 26 regarding table

updating which includes updating an address to be that of a packet relay device 4/GW-p; and see

col. 20, lines 13-15 and lines 65-67 defining packet relay device 4 as a gateway); and sending

(e.g., see col. 17, lines 1-53 regarding sending location registration message and storing

communications in packet relay device 4 correspondence table) the access point information

(e.g., comprising location registration message and packet relay device information) to a third

access point (e.g., home network inherently corresponding to one of the other subnets in private

network 1 and/or Internet 2, see col. 9, lines 66-67 regarding "another subnet within private

network 1" and col. 10, line 5 regarding "another subnet within the Internet 2"; see also col. 15,

line 43 – col. 19, line 44 regarding movement among subnets within the same network; see also

private network server 17 in FIG. 5) that supports Mobile IP (e.g., see col. 17, lines 1-53 and col.

18, lines 59-61 regarding "Mobile IP"), thereby enabling the third access point to compare a

received data packet with the access point subnet (e.g., see col. 10, lines 6-27 regarding each

home agent corresponds to a home agent according to the basic specification of Mobile IP, and

regarding the registration message indicating a location of the mobile terminal 3, and

particularly, lines 24-27 regarding the location comprising the subnet) to determine whether to

send a registration request on behalf of the node (e.g., mobile terminal 3) using the gateway (e.g.,

packet relay device 4; see col. 20, lines 13-15 and lines 65-67 defining packet relay device 4 as a

gateway) as the node's Home Agent (e.g., see col. 9, lines 46-61 regarding packet relay device 4

relaying the messages between the networks 1 and 2 for the mobile terminal 3).

Regarding claim 2, Inoue teaches the first access point and the second access point

support Mobile IP (e.g., see col. 10, lines 6-27 regarding each home agent is corresponds to a

home agent according to the basic specification of Mobile IP).

Regarding claim 3, Inoue teaches the first access point is responsible for sending the

received access point information to one or more additional access points (e.g., see col. 13, lines

49-59 regarding transferring the location registration message from one home agent to a home

agent of another network).

Regarding claim 4, Inoue teaches the first access point is responsible for sending the

received access point information to one or more active access points (e.g., see col. 13, lines 49-

59 regarding transferring the location registration message from one home agent to a home agent

of another network).

Regarding claim 5, Inoue teaches the second access point is an active access point (e.g.,

see col. 13, lines 49-59 wherein an active operation is performed, including "the home agent of

the other network carries out the usual registration of Mobile IP by setting the interface address

of an interface of the packet relay device 4").

Regarding claim 6, Inoue teaches the third access point (e.g., home network inherently

corresponding to one of the other subnets in private network 1 and/or Internet 2, see col. 9, lines

66-67 regarding "another subnet within private network 1" and col. 10, line 5 regarding "another

subnet within the Internet 2"; see also private network server 17 in FIG. 5) is an active access

point (e.g., see col. 133, lines 49-59 wherein an active operation is performed, including "the

home agent of the other network carries out the usual registration of Mobile IP by setting the

interface address of an interface of the packet relay device 4").

Regarding claim 7, Inoue teaches identifying the third access point (e.g., home network

inherently corresponding to one of the other subnets in private network 1 and/or Internet 2, see

col. 9, lines 66-67 regarding "another subnet within private network 1" and col. 10, line 5

regarding "another subnet within the Internet 2"; see also col. 15, line 43 – col. 19, line 44

regarding movement among subnets within the same network; see also private network server 17

in FIG. 5) in a list of active access points that identifies one or more active access points prior to sending the access point information to the third access point (e.g., see col. 14, line 43 – col. 19, line 44 regarding transmitting registration messages to a known care-of address when moving among subnets within the same network).

Regarding claim 8, Inoue teaches updating a list of active access points to include the second access point, the list of active access points identifying one or more active access points (e.g., see col. 13, line 60 – col. 14, line 26 regarding "table" comprising addresses of the home agents performing active steps such as transferring messages; see also col. 14, lines 46-53 regarding home agents storing care-of address; see also col. 12, lines 1-67 regarding correspondence table 41).

Regarding claim 9, Inoue teaches the list of active access points comprises an IP address for each of the active access points (e.g., see col. 13, lines 16-25 regarding information comprising an IP address).

Regarding claim 10, Inoue teaches sending access point information for one or more additional access points to the second access point (e.g., see col. 13, lines 49-59 regarding transferring the location registration message from one home agent to a home agent of another network), the access point information including an access point subnet (e.g., see col. 10, lines 6-27 regarding the registration message indicating a location of the mobile terminal 3, and particularly, lines 24-27 regarding the location comprising the subnet) and a gateway (e.g., see col. 13, line 60 – col. 14, line 26 regarding table updating which includes updating an address to be that of a packet relay device 4/GW-pl; and see col. 20, lines 13-15 and lines 65-67 defining packet relay device 4 as a gateway).

Regarding claim 11, Inoue teaches the access point information further comprises at least one of a netmask and an IP address associated with the second access point (e.g., see col. 13, lines 16-25 regarding information comprising an IP address).

Regarding claim 12, Inoue teaches storing the access point information in a subnet mapping table including a plurality of entries, each of the plurality of entries being associated with a difference access point (e.g., see col. 13, line 60 – col. 14, line 26 regarding "table updating operation" regarding storing location information; and see col. 10, lines 24-27 regarding location information comprising "subnet" information).

Regarding claim 13, Inoue teaches deleting the access point information associated with the second access point; and instructing the third access point to delete the access point information associated with the second access point (e.g., see col. 14, line 54 – col. 15, line 34; specifically, col. 15, lines 4 and 33 regarding deleting the information).

Regarding claim 14, Inoue teaches removing an IP address associated with the second access point from a list of active access points (e.g., see col. 14, line 54 – col. 15, line 34; specifically, col. 15, lines 4 and 33 regarding deleting the information; also see col. 13, lines 16-25 regarding information comprising an IP address).

Regarding claims 15 and 17, Inoue teaches the first access point discussed above regarding claim 1 comprises means for the method steps in claim 1, and computer-readable medium with instructions for the method steps in claim 1 (e.g., see col. 21, lines 23-44 regarding the steps of Inoue being performed by computer code in a storage medium). That is, Inoue teaches, in a first access point, a method of supporting mobility for a node that does not support Mobile IP, comprising: means and instructions for receiving access point information from a

second access point (e.g., see col. 13, lines 49-59 regarding receiving a location registration

message from a home agent by another home agent; see also FIGS. 3-5 regarding home agents 5

and 6 and communications between corresponding networks 1 and 2); means and instructions for

storing access point information (e.g., comprising location registration message and packet relay

device information; see col. 13, lines 26-33 regarding home agents storing the location

information, and see col. 13, line 60 – col. 14, line 26 regarding table updating which includes

updating an address to be that of a packet relay device 4/GW-p), the access point information

including information identifying an access point subnet (e.g., see col. 10, lines 6-27 regarding

the registration message indicating a location of the mobile terminal 3, and particularly, lines 24-

27 regarding the location comprising the subnet) and a gateway (e.g., see col. 13, line 60 – col.

14, line 26 regarding table updating which includes updating an address to be that of a packet

relay device 4/GW-pl; and see col. 20, lines 13-15 and lines 65-67 defining packet relay device 4

as a gateway); and means and instructions for sending (e.g., see col. 17, lines 1-53 regarding

sending location registration message and storing communications in packet relay device 4

correspondence table) the access point information (e.g., comprising location registration

message and packet relay device information) to a third access point (e.g., home network

inherently corresponding to one of the other subnets in private network 1 and/or Internet 2, see

col. 9, lines 66-67 regarding "another subnet within private network 1" and col. 10, line 5

regarding "another subnet within the Internet 2"; see also col. 15, line 43 – col. 19, line 44

regarding movement among subnets within the same network; see also private network server 17

in FIG. 5) that supports Mobile IP (e.g., see col. 17, lines 1-53 and col. 18, lines 59-61 regarding

"Mobile IP"), thereby enabling the third access point to compare a received data packet with the

access point subnet (e.g., see col. 10, lines 6-27 regarding each home agent corresponds to a

home agent according to the basic specification of Mobile IP, and regarding the registration

message indicating a location of the mobile terminal 3, and particularly, lines 24-27 regarding

the location comprising the subnet) to determine whether to send a registration request on behalf

of the node (e.g., mobile terminal 3) using the gateway (e.g., packet relay device 4; see col. 20,

lines 13-15 and lines 65-67 defining packet relay device 4 as a gateway) as the node's Home

Agent (e.g., see col. 9, lines 46-61 regarding packet relay device 4 relaying the messages

between the networks 1 and 2 for the mobile terminal 3).

Regarding claim 16, Inoue teaches the first access point discussed above regarding claim

1, and further teaches the access point comprises a processor (e.g., see col. 10, lines 6-23

regarding the home agent is in accordance with Mobile IP for performing steps inherently

requiring performance by a processor); and a memory (e.g., see col. 13, line 60 – col. 14, line 26

regarding "table" and also see col. 13, lines 26-33 regarding home agent "stores the address"

which inherently is done by a memory), at least one of the processor and the memory adapted for

performing the method steps recited in claim 1. That is, the processor and/or memory in Inoue

perform steps of: receiving access point information from a second access point (e.g., see col.

13, lines 49-59 regarding receiving a location registration message from a home agent by another

home agent; see also FIGS. 3-5 regarding home agents 5 and 6 and communications between

corresponding networks 1 and 2); storing access point information (e.g., comprising location

registration message and packet relay device information; see col. 13, lines 26-33 regarding

home agents storing the location information, and see col. 13, line 60 – col. 14, line 26 regarding

table updating which includes updating an address to be that of a packet relay device 4/GW-p),

the access point information including information identifying an access point subnet (e.g., see

col. 10, lines 6-27 regarding the registration message indicating a location of the mobile terminal

3, and particularly, lines 24-27 regarding the location comprising the subnet) and a gateway (e.g.,

see col. 13, line 60 – col. 14, line 26 regarding table updating which includes updating an address

to be that of a packet relay device 4/GW-pl; and see col. 20, lines 13-15 and lines 65-67 defining

packet relay device 4 as a gateway); and sending (e.g., see col. 17, lines 1-53 regarding sending

location registration message and storing communications in packet relay device 4

correspondence table) the access point information (e.g., comprising location registration

message and packet relay device information) to a third access point (e.g., home network

inherently corresponding to one of the other subnets in private network 1 and/or Internet 2, see

col. 9, lines 66-67 regarding "another subnet within private network 1" and col. 10, line 5

regarding "another subnet within the Internet 2"; see also col. 15, line 43 – col. 19, line 44

regarding movement among subnets within the same network; see also private network server 17

in FIG. 5) that supports Mobile IP (e.g., see col. 17, lines 1-53 and col. 18, lines 59-61 regarding

"Mobile IP"), thereby enabling the third access point to compare a received data packet with the

access point subnet (e.g., see col. 10, lines 6-27 regarding each home agent corresponds to a

home agent according to the basic specification of Mobile IP, and regarding the registration

message indicating a location of the mobile terminal 3, and particularly, lines 24-27 regarding

the location comprising the subnet) to determine whether to send a registration request on behalf

of the node (e.g., mobile terminal 3) using the gateway (e.g., packet relay device 4; see col. 20,

lines 13-15 and lines 65-67 defining packet relay device 4 as a gateway) as the node's Home

Agent (e.g., see col. 9, lines 46-61 regarding packet relay device 4 relaying the messages

between the networks 1 and 2 for the mobile terminal 3).

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. U.S. Patent Application Publication Nos. US 2002/0018456 by Kakemizu et al. and

US 2004/0081086 by Hippelainen et al. each disclose methods for supporting mobility for a

node. Also, Cisco applications including U.S. Patent Nos. 6,195,705 and 6,466,964 to Leung,

U.S. Patent No. 6,795,857 to Leung et al., and U.S. Patent Application Publication No. US

2003/0123421 by Feige et al. disclose similar methods for supporting mobility for a node.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Justin M. Philpott whose telephone number is 571.272.3162. The

examiner can normally be reached on M-F, 9:00am-5:00pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chi Pham can be reached on 571.272.3179. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin M Philpott